DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 13.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-006696
Date Inspected: 11-May-2009

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Oregon Iron Works Clackamas, Or.

OSM Arrival Time: 2100
OSM Departure Time: 530
Location: Clackamas, Oregon

CWI Name:	Jon Nickolich, Mike Gregson			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☐ Yes	☐ No	☑ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Hinge K Pipe Beams

Summary of Items Observed:

On this date, Caltrans Quality Assurance Inspector (QA) Sherri Brannon is present at the Oregon Iron Works, Inc. (OIW) jobsite in Clackamas, Oregon for the purpose of observing fabrication of the Hinge K Pipe Beams.

OIW Fabrication Shop-Bay 3 (sub-assembly):
QA Inspector Brannon randomly observed OIW qualified welder Mr. Jayson Sinsel Heaton ID#S58 and one helper welding fill pass's joining stiffener ring MK #a125 (HPS 485 W) to hinge K pipe beam half section MK#a124-14 (HPS 485 W). The partial joint penetration (PJP) groove weld is identified as weld joint #WM3-14. Mr. Heaton was observed welding in the 1G (flat) position utilizing submerged arc welding (SAW) process with a 2.4mm diameter electrode, filler metal brand Lincoln Electric LA85 class F9A4-Eni5-G-H2. QA Inspector Brannon observed the OIW QC CWI Inspector Mr. Jon Nickolich verifying that the pre-heat and welding parameters were in accordance with the Welding Procedure Specification (WPS). Welding parameters measured by QA are as follows: 575 amps, 30.0 volts and a travel speed of 483mm per minute appear to be in conformance with approved welding procedure specification WPS 4020 revision number 0.

OIW Fabrication Shop-Bay 3 (sub-assembly):
QA Inspector Brannon randomly observed OIW qualified welder Mr. Jayson Sinsel Heaton ID#S58 and one helper tack welding joining stiffener ring MK #a125 (HPS 485 W) to hinge K pipe beam half section MK#a124-14 (HPS 485 W). The partial joint penetration (PJP) groove weld is identified as weld joint #WM3-12. Mr. Heaton was observed welding in the 1G (flat) position utilizing flux cored arc welding (FCAW) process with a 1.6mm diameter electrode, filler metal brand Select Arc class select 920-Ni1 semi-automatic. QA Inspector Brannon observed the OIW QC CWI Inspector Mr. Mike Gregson verifying that the pre-heat and welding parameters were

in accordance with the Welding Procedure Specification (WPS). Welding parameters measured by QA are as follows: 250 amps and 27.0 volts appear to be in conformance with approved welding procedure specification WPS 3049 revision number 0. Fit-up gap inspection appeared to be within the 5mm gap allowance.

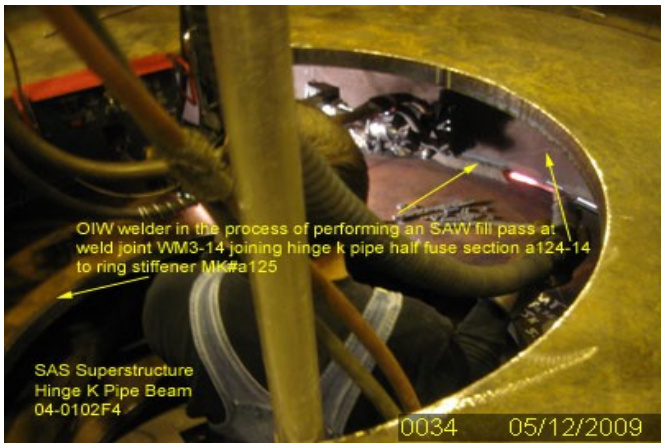
Quality Assurance Inspection (VT/MT):
QA Inspector Brannon performed visual inspection (VT) and magnetic particle testing (MT) root pass at hinge k pipe beam fuse section a124-14 (HPS 485 W) stiffener ring weld joint WM3-14 partial joint penetration (PJP) weld. See Caltrans Magnetic Particle Test Report, TL-6028 dated March 11, 2009 for additional information.

Quality Assurance Inspection (VT/MT):
QA Inspector Brannon performed visual inspection (VT) and magnetic particle testing (MT) at hinge k pipe beam forging section a111-4 (A508 Gr. 4N Class 2) to base plate a110-4 (HPS 485 W) sub assembly section #102A-4, weld joints W2-12 and W2-13 complete joint penetration (CJP) weld. See Caltrans Magnetic Particle Test Report, TL-6028 dated March 11, 2009 for additional information.

Caltrans Status and Production Tracking:
QA Inspector Brannon also updated Caltrans status and production tracking logs for tracking of check samples, procedure qualification record (PQR), critical weld repairs (CWR), non-critical welding repairs (WRR), completed and in process welding, QC/QA non-destructive testing.

Material, Equipment, and Labor Tracking:
QA Inspector Brannon performed a verification of personnel at OIW. QA Inspector Brannon observed 1 Supervisor, 2 Quality Control and 2 production personnel on this date.

The following digital photograph below illustrates observation of the activities being performed.



Summary of Conversations:
No relevant conversations to report.

Comments
This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916) 813-3677, who represents the Office of Structural Materials for your project.

WELDING INSPECTION REPORT

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Inspected By:	Brannon,Sherri	Quality Assurance Inspector
Reviewed By:	Adame,Joe	QA Reviewer